BOTTLING PLANT AND METHOD OF OPERATING A BOTTLING PLANT AND A BOTTLING PLANT WITH SECTIONS FOR STABILIZING THE BOTTLED PRODUCT

CONTINUING APPLICATION DATA

This application is a continuation-in-part of U.S. Serial No. 09/510,862, filed on February 23, 2000, PAT # 6,374,575 which claims priority from Federal Republic of Germany Patent Application No. 199 08 035.6 filed February 24, 1999.

BACKGROUND OF THE INVENTION

1. Field of the Invention:

The present invention relates to a bottling plant and method of operating a bottling plant and a bottling plant with sections for stabilizing bottled products in containers.

2. Background Information:

In the beverage industry, in particular when products being bottled are easily perishable, it is common practice to heat-stabilize the products. In bottling plants of the known art, the containers that contain the products are transported in a practically uniform movement from the entry of the plant to the exit from the plant. As they move through the plant, they are heated until they have achieved the required degree of heat-stabilization and are then cooled, whereupon the heat-stabilizing process is completed. A heat-stabilizing tunnel provided for this purpose consequently has a heating section, a superheating and heat-stabilizing section, and a final cooling section. The individual sections can have additional sub-zones. The gradual heating and cooling that such an arrangement provides is preferred, in particular for the glass bottles used in the beverage industry, to prevent any destruction of the glass bottles caused by abrupt temperature changes. The transmission of heat to the product in the containers normally occurs by spraying